

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP19912	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/AU2004/000933	International filing date (<i>day/month/year</i>) 9 July 2004	Priority date (<i>day/month/year</i>) 11 July 2003
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ E04H 12/30, B65D 88/06, 90/02, E03B 3/03, 11/00.		
Applicant BLUESCOPE STEEL LIMITED et al		

This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

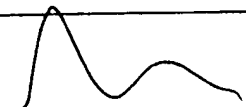
☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 11 May 2005	Date of completion of the report 24 May 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  R. WEBER Telephone No. (02) 6283 2546

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☐ the international application as originally filed/furnished

☒ the description:

pages **1 to 10**, as originally filed/furnished

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☒ the claims:

pages **13**, as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* received by this Authority on with the letter of

pages* **11 and 12**, received by this Authority on **11 May 2005** with the letter of **11 May 2005**.

☒ the drawings:

pages **1 and 2**, as originally filed/furnished

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

* : If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/000933

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1 to 26.	YES
	Claims	NO
Inventive step (IS)	Claims 1 to 26.	YES
	Claims	NO
Industrial applicability (IA)	Claims 1 to 26.	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

Novelty (N) and Inventive Step (IS) Claims 1 to 26.

The claims as presently defined are directed to an article made of sheet metal and having a lock seam where there is a coating applied at the location of the overlap and provides a gasket so that the joint is watertight.

No individual citation or obvious combination of citations disclose these features.

The closest art may be seen in the following documents:- AU 45140/97, GB 2228760 A, WO 1992 22480 A, DE 19939180 A and DE 20009149 A.

Industrial Applicability (IA) Claims 1 to 26.

All claims are considered to be industrially applicable.

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/AP20 Rec'd PCT/PTO 11 JAN 2006

CLAIMS

1. An article formed at least partially from at least one metal sheet and incorporating at least one lockseam that interconnects adjacent edge margins of the at least one sheet, the lockseam including a region where the edge margins overlap and wherein at least one of the edge margins has a coating applied to it that is disposed in the overlap and forms a gasket to provide a watertight joint at the lockseam.
2. An article according to claim 1, wherein both edges in the overlap incorporate the coating and wherein the coating of one edge is in engagement with the coating of the other edge in the overlap to form the watertight joint.
3. An article according to claim 1 or 2, wherein the coating is compressed in the overlap.
4. An article according to claim 3, wherein the coating is compressed by an amount in the range of 10 - 50% of its original thickness.
5. An article according to any preceding claim, wherein the coating is in the form of a polymeric film.
6. An article according to claim 5, wherein the polymeric film is applied across at least one of the major surfaces of the at least one sheet so as to provide a moisture barrier and/or to enhance the chemical resistance of the sheet.
7. An article according to claim 5 or 6, wherein the polymeric film is selected from the group consisting of: low density or high density polyethylene, PVC, and polypropylene.
8. An article according to claim 7, wherein the thickness of the film is in the range of 100 to 400 microns.
9. An article according to any one of claims 1 to 4, wherein the coating is applied only along the at least one edge margin.
10. An article according to claim 9, wherein the coating is selected from the group consisting of low density or high density polyethylene, PVC, polypropylene, natural or synthetic rubber.

11. An article according to any preceding claim, wherein the thickness of the metal sheet is between 0.35 - 3.00mm.
12. An article according to any preceding claim, wherein the metal sheet is steel that incorporates a corrosion resistant metal coating.
13. An article according to any preceding claim, wherein one edge margin is disposed around the other edge margin so that the one edge margin abuts both sides of the other edge margin.
14. An article according to any preceding claim, wherein the edge margins in the overlap are generally flat.
15. An article according to claims 1 to 13, wherein the edge margins in the overlap are cambered.
16. An article according to any preceding claim, wherein the article is a metal pipe.
17. An article according to claim 16, wherein the article is a metal spiral wound pipe.
18. An article according to any one of claims 1 to 15, wherein the article is a metal tank.
19. A method of forming a watertight joint between two edge margins formed of metal sheet, the method comprising the steps of:
 - providing at least one of the two edge margins with a coating applied to it; and
 - interconnecting the edge margins to form a lockseam, the edge regions being arranged to overlap in the lockseam with the coating being located in the overlap between the metal sheets.
20. A method according to claim 19, further comprising the step of:
 - applying pressure to the edge margins so as to compress the coating in the lockseam.
21. A method according to claim 20, wherein a clinching force is applied to the edge margins so as to compress the coating in the lockseam.